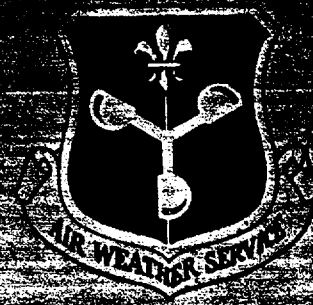


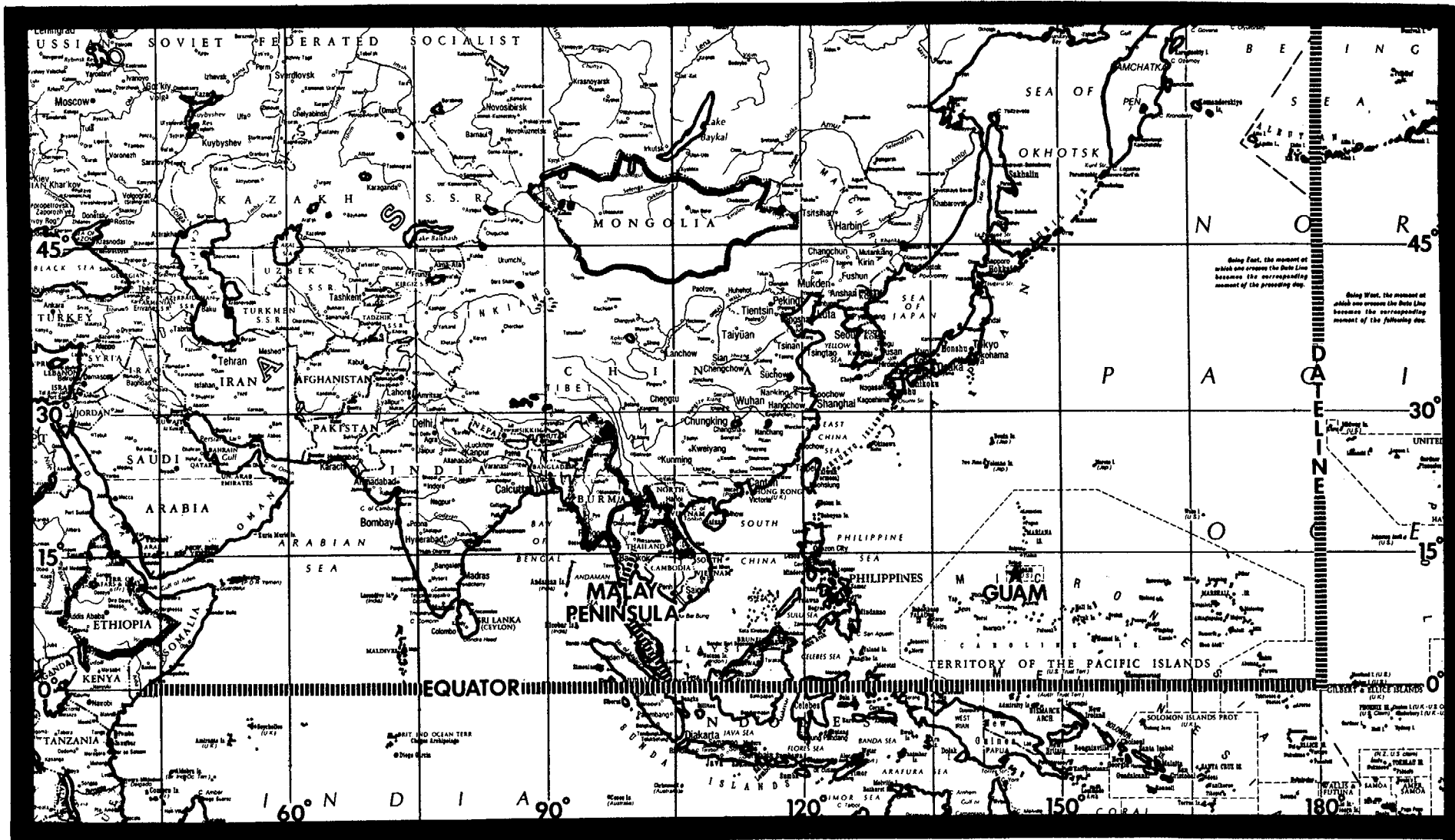
1977



ANNUAL TYPHOON REPORT



JOINT TYPHOON WARNING CENTER
GUAM, MARIANA ISLANDS



Indian Ocean Area (Malay Peninsula to Africa)

Pacific Area (Dateline to Malay Peninsula)

AREA OF RESPONSIBILITY - JOINT TYPHOON WARNING CENTER, GUAM

U. S. FLEET WEATHER CENTRAL
JOINT TYPHOON WARNING CENTER

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1977
ANNUAL TYPHOON REPORT

*Departed during 1977 season

FRONT COVER:

Infrared photograph of a two-storm situation with a third during its early stages of development, 19 September 1977. Typhoon Dinah (lower left) at 65 kt (33 m/sec) is meandering in the South China Sea. Details of Dinah can be found on page 30. Tropical Storm Emma (upper right) with 45 kt (23 m/sec) winds is undergoing recurvature southeast of Japan. A yet unnumbered tropical disturbance (which will eventually become Tropical Storm Freda) is slowly developing in the Philippine Sea (lower right). [Direct readout NOAA-5 VHRR IR imagery as received by Det 1, 14W Nimitz Hill, Guam.]

FOREWORD

Tropical cyclones have always been a menace to both military and civilian activities in tropical and subtropical oceanic regions. During recent times, much effort has been funneled toward more accurate tropical cyclone forecasts and toward more efficient operational responses to those forecasts. A large portion of this effort is based on studies which, if meaningful, must be based on accurately documented data. The Annual Typhoon Report represents such documentation. The body of this report is a summary of the tropical cyclones that occurred during 1977 in the western North Pacific, central North Pacific and North Indian Oceans.

The Annual Typhoon Report is prepared by the staff of the Joint Typhoon Warning Center (JTWC). JTWC is a combined USAF/USN entity operating under the command of Fleet Weather Central, Guam. The senior Air Force officer assigned is designated as Director, JTWC and is responsible to the Commanding Officer, Fleet Weather Central, Guam for the operation of the JTWC. The senior Naval officer of the JTWC is designated as the Deputy Director/Operations Officer. JTWC was established by CINCPACFLT message 280208Z April 1959 when directed by CINCPAC message 230233Z April 1959. Its operation is guided by the CINCPAC INST 3140.1 (series).

The Fleet Weather Central/Joint Typhoon Warning Center, Guam has the responsibility to:

1. Provide continuous meteorological watch of all tropical activity north of the equator, west of the Date Line, and east of the African coast (JTWC area of responsibility) for potential tropical cyclone development;
2. Provide warnings for all tropical cyclones in the assigned area of responsibility;
3. Determine tropical cyclone reconnaissance requirements and assign priorities;

4. Conduct an annual post analysis of all tropical cyclones occurring within the area north of the equator from 140W west to the coast of Africa and prepare an Annual Typhoon Report for issuance to interested agencies; and

5. Conduct tropical cyclone forecasting and detection research as practicable.

In the event of incapacitation of the JTWC, the alternate (AJTWC) assumes the responsibility for the issuance of warnings. In early November, 1977, Fleet Weather Central, Pearl Harbor, Hawaii was designated as the AJTWC. Assistance in determining tropical cyclone reconnaissance requirements and in obtaining reconnaissance data is provided by Detachment 4, 1st Weather Wing, Hickam AFB, Hawaii. Previously, the AJTWC designate was Detachment 17, 30WS, Yokota AB, Japan, with assistance from the Naval Weather Service Facility, Yokosuka, Japan.

The Central Pacific Hurricane Center, (CPHC) Honolulu, Hawaii is manned by members of the U. S. National Weather Service who are responsible for the issuance of tropical cyclone warnings for the area north of the equator from the Date Line east to 140W. Warnings are issued in coordination with the Fleet Weather Central, Pearl Harbor and Detachment 4, 1WW, Hickam AFB, Hawaii. Post analysis information is forwarded to the JTWC for inclusion in the Annual Typhoon Report.

The meteorological services of the United States are planning to implement the metric system of measurement over the next few years. Some civilian and military agencies have started the education program by showing the metric equivalents to current units of measure. This Annual Typhoon Report includes metric equivalents to most measures.

Unless otherwise stated all satellite data used in this ATR is Air Force Weather Service DMSP Data as acquired by OL-C, 27CS personnel and analyzed by Det 1, 1WW personnel collocated with JTWC at Nimitz Hill, Guam.

TABLE OF CONTENTS

CHAPTER I

OPERATIONAL PROCEDURES

1. General-----

2. Data Sources-----

3. Analyses-----

4. Forecast Aids-----

5. Forecasting Procedures-----

6. Warnings-----

7. Prognostic Reasoning Message-----

8. Significant Tropical Weather Advisory-----

9. Tropical Cyclone Formation Alert-----

CHAPTER II

RECONNAISSANCE AND COMMUNICATIONS

1. General-----

2. Reconnaissance-----

3. Aircraft Reconnaissance Evaluation Criteria-----

4. Aircraft Reconnaissance Summary-----

5. Satellite Reconnaissance Summary-----

6. Radar Reconnaissance Summary-----

7. Communications-----

CHAPTER III

RESEARCH SUMMARY

1. General-----

2. Operational Application of a Tropical Cyclone
Recurvature/Non-Recurvature Study Based on 200 MB
Wind Fields-----

3. Tropical Cyclone Center Fix Data for the 1976 Storm
Season-----

4. Evaluation of the Dvorak IR Technique for Use With
DMSP Data-----

5. A Climatology of Tropical Cyclones for the Period
1971-1976-----

6. Relationships Between the Temporal Variation of
Equivalent Potential Temperature and Tropical
Cyclone Intensity-----

7. Transitioning of Tropical Cyclones to Extratropical
Cyclones-----

8. Future Aircraft Reconnaissance Storm Tracks-----

9. Tropical Chart Series for September 1975-----

10. Tropical Weather Study Guide-----

CHAPTER IV

SUMMARY OF TROPICAL CYCLONES

1. Western North Pacific Tropical Cyclones-----

Individual Typhoons

Typhoon Sarah-----

Typhoon Thelma-----

Typhoon Vera-----

Typhoon Babe-----

Typhoon Dinah-----

Typhoon Gilda-----

Typhoon Ivy-----

Typhoon Jean-----

Typhoon Kim-----

Typhoon Lucy-----

Typhoon Mary-----

2. North Indian Ocean Tropical Cyclones-----

Individual Cyclone

TC 22-77-----

3. Central North Pacific Tropical Cyclones-----

CHAPTER V

SUMMARY OF FORECAST VERIFICATION DATA

1. Annual Forecast Verification-----

2. Comparison of Objective Techniques-----

3. Evaluation of the Tropical Cyclone Model (TCM)-----

4. Pacific Area Tropical Storm and Depression Data-----

5. Pacific Area Typhoon Data-----

6. Indian Ocean Area Cyclone Data-----

CHAPTER VI	TROPICAL CYCLONE CENTER FIX DATA	page
	1. Introduction-----	79
	2. Format-----	80
	3. Western North Pacific Fix Data-----	82
	4. North Indian Ocean Fix Data-----	115
APPENDIX	CONTRACTIONS AND DEFINITIONS	
	1. Contractions-----	121
	2. Definitions-----	122
DISTRIBUTION		123